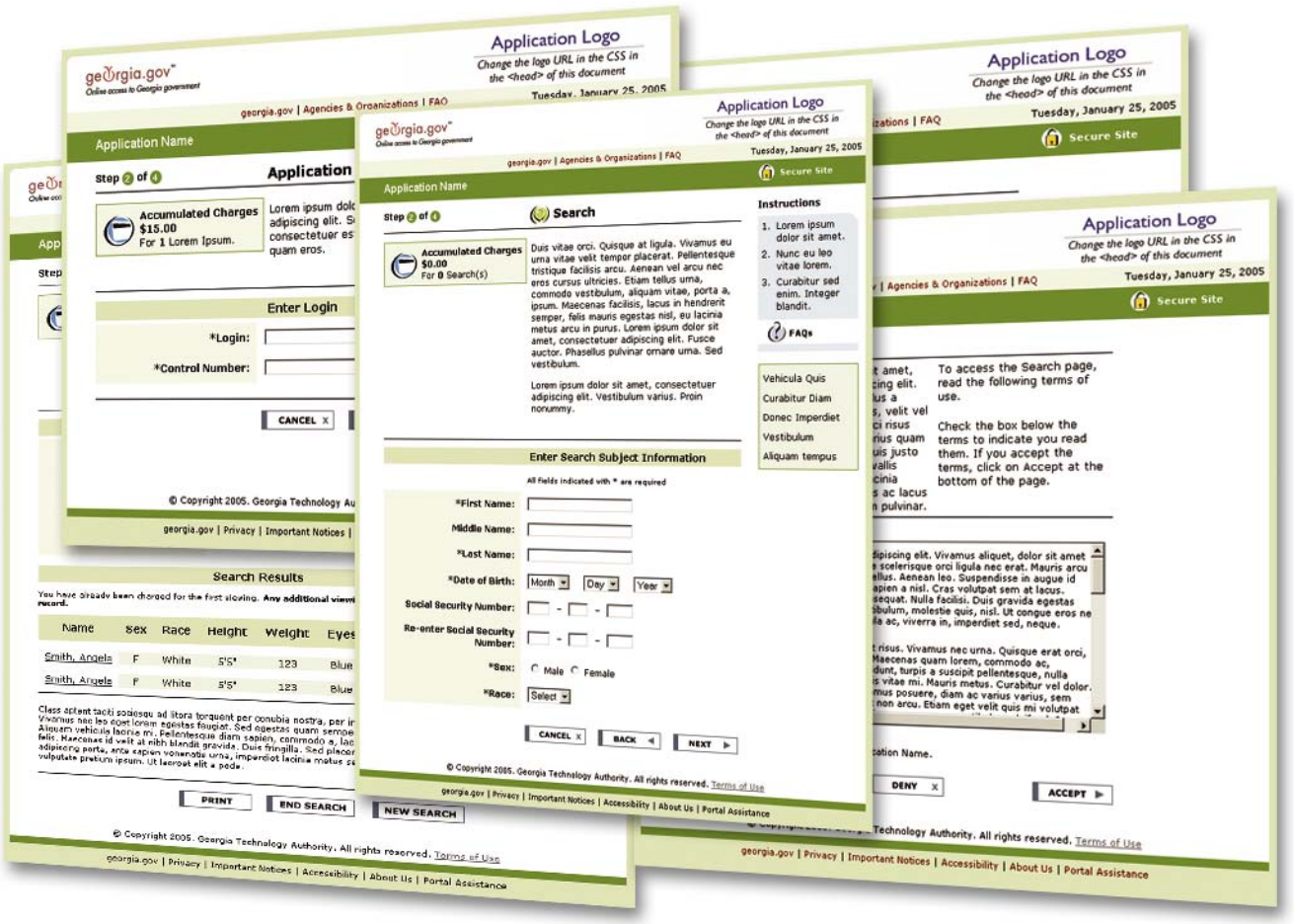
Online Application Development Guide

Version 4.0 / 2005



georgia.gov℠
Online access to Georgia government

GTA
Georgia Technology Authority

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1.0 Introduction

The State of Georgia's official government portal, www.georgia.gov, provides a single point of access to online government information and services. As the needs of Georgia citizens change and grow, so will the portal and its offerings. Currently, through the portal, Georgia citizens can access online applications such as:

- Driver's License Renewal
- Child Support Payments
- Business Registration
- Cruise Card Service

These applications represent the State of Georgia's continuing effort to use technology to provide access to the government's offerings to as many Georgia citizens as possible.

The State of Georgia is striving to create a consistent, trusted and branded online presence through georgia.gov and all new and existing online applications. As new online applications are developed, visual and functionality standards should be adhered to in order to provide a consistent and intuitive experience for all end-users. This Guide outlines standards and processes designed to define and streamline this effort.

1.1 The Purpose of This Guide

The purpose of this Guide is to provide guidelines and resources for the development of online applications. Standards, information architecture, HTML/CSS templates, the JSP tag library, application modules, quality assurance, Section 508 accessibility and other specifications (such as browser and connection speed support) are explained in detail. Please note that this Guide will not cover user interface standards such as look-and-feel, content, typography, color or graphical elements.

For information about these user interface standards, please refer to the georgia.gov style guide.

Following the standards set forth in this development guide and those in the georgia.gov style guide will ensure a consistent, intuitive experience for end-users and will portray Georgia government with an official, high-quality online presence.

1.2

1.2 Overview of the Process for Creating a New Online Application

The overall approach and interaction point between GTA and an agency for creating, migrating and maintaining an application in georgia.gov contains major decision points to help both parties reach mutual agreement before moving to the next phase of a project or release. For application delivery, the major decision points are:

- Agreement to Start (ATS) – An agreement between the agency and the GTA Portal Leadership Team that confirms a project is ready to move from the Planning stage to the Requirements stage.
- Agreement to Implement (ATI) – An agreement between the agency and the GTA Portal Leadership Team that confirms a project has successfully completed the Analysis and Design stage and is ready for the Implementation (Build) stage.
- Agreement to Deploy (ATD) – An agreement between the agency and the GTA Portal Leadership Team that confirms an application has been fully tested by the agency and tested/certified by the GTA project team prior to release to Production.

A high level view of the process for creating new online applications is:

1. Analyze the application requirements
2. Design the information architecture
   a. Use cases
   b. Site map
   c. Site flow (flow charts)
   d. Wireframes
3. Customize and/or code the HTML/CSS templates
4. Build and implement the application modules using the JSP tag library
5. Test and conditionally promote the application

Through each of the above phases, the Standards outlined in the next section of this Guide should be adhered to and implemented as necessary.

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2.0 Standards

Every agency that launches an online application shall adhere to the georgia.gov standards contained in this section. Such adherence is necessary to protect the integrity of georgia.gov and to ensure the usability experience of the constituent. While these standards do not dictate procedures or details at a micro level, they do provide the framework for uniformity and consistency in the following areas:

- georgia.gov brand and logo usage
- Privacy statement usage
- Security
- Accessibility
- Domain name usage
- Trademark, service mark and copyright usage
- Applications core requirements
- Support core requirements

An agency is responsible for developing its own processes and procedures to comply with georgia.gov policies, standards and requirements.

2.1 georgia.gov Brand and Logo Usage

An agency must adhere to the requirements and restrictions for the use of the georgia.gov brand and logo. Proper use and display of the georgia.gov logo are incorporated into the HTML/CSS templates used to create applications.

For additional information on usage requirements, see the georgia.gov style guide.

2.2 Privacy Statement Usage

An agency should review the standard georgia.gov Privacy Statement to ensure it accurately reflects their application. If the statement is inaccurate the agency must notify both its legal counsel and GTA and must create an accurate privacy statement for their application. GTA will work with an agency to include its customized privacy statement on its application.

See the current georgia.gov Privacy Statement.

2.3 Security

An agency should take reasonable steps to ensure the confidentiality, integrity and availability of its application on georgia.gov. This is essential to maintain the status as a trusted provider and sources for government services. An agency must adhere to all security standards and policies including all GTA-issued Enterprise Information Security Policies unless specifically granted an exception. An agency may also develop policies and procedures to handle agency-specific cases.

See the current Enterprise Information Security Policies.

2.4

2.4 Accessibility

In 1998, Congress enacted Section 508 as an amendment to the Rehabilitation Act requiring government agencies to make their information technology accessible to people with disabilities. The purpose of Section 508 is to eliminate barriers in information technology for these people. While Section 508 describes the "what" of accessibility, the World Wide Web Consortium (W3C) has developed globally accepted guidelines to explain the "how" of web accessibility.

See the W3Cs latest recommendations on the web at: www.w3.org/WAI/

See the government standards on accessibility at www.section508.gov

An agency must become familiar with the guidelines for achieving universal accessibility for applications and must apply them in developing online applications. Many accessibility standards are built into the HTML/CSS templates in the template library.

See the current Accessibility Policy.

2.5 Domain Name Usage

Adherence to the georgia.gov Domain Name Standard is required to provide consistency and reliability to constituents to ensure they are accessing an official government application. A domain name uniquely identifies an application and is, in effect, an "online brand." Domain name holders must meet certain eligibility requirements and follow certain standards in using the names to preserve the integrity of the name.

GTA is the official registrant and manager of second-level domains (georgia.gov, ga.gov, mygeorgia.gov and myga.gov).

I. Domain Name Registration Process

GTA will assign a third-level domain name (e.g., gta.ga.georgia.gov) to all agencies. Agencies can also request additional third-, fourth- or subsequent-level domain names.

II. Requesting Additional Domain Names

An agency should follow these steps to request the registration of additional domain names:

1. Review the georgia.gov Domain Name Standard available under the Enterprise Policies and Standards channel.
2. Review the Domain Name Selection section of the standard, as well as the Domain Naming Guidelines prior to finalizing the requested domain name.
3. Submit an email with the requested domain name either to the GTA Traffic Mailbox (traffic@gta.ga.gov) or to the agency's georgia.gov project manager.

Once the registration process is complete, the GTA Domain Registrar will review the request. If approved, GTA will assign domain names in accordance with the georgia.gov Domain Name Standard.

III. Agency Domain Name Responsibilities

An agency is responsible for managing the use of their sub-portal domain names and the paths within such sub-portals in accordance with the georgia.gov Domain Name Standards.

2.6

2.6 Trademark, Service Mark and Copyright Usage

An agency must adhere to the georgia.gov Intellectual Property Display Standard for all content in an online application. This standard is designed to uphold the intellectual property rights of all parties and to protect the state from claims of infringement. For content to be used, one or more of the following statements must be true:

- It must be in the public domain
- It must be owned by the state
- The state must possess a valid right, license or permission to use it

Please note that the use of photographs may require not only the copyright holder's express permission but also the permission of the person or persons in the image itself.

GTA may request that an agency provide proof of permission or license to use third party content and may remove the content and/or the page upon which it appears if such proof is unavailable or nonexistent. If GTA receives a claim of infringement, it will notify the appropriate entity so that it may respond to the claim and may remove the content in question until the issue is resolved.

Every page of an application should include a hyperlink to the standard Trademark, Service Mark and Copyright Notice found on the georgia.gov Important Notices page. This hyperlink is incorporated into the HTML/CSS templates in the template library.

See the georgia.gov Intellectual Property Display Standard. See the Trademark, Service Mark and Copyright Notices that is under the Important Notices link on the footer of all georgia.gov pages.

2.7 Application Core Requirements

An agency must adhere to certain requirements for creating, testing, deploying and hosting applications on georgia.gov. The purpose of these requirements is to provide a reliable, repeatable and efficient process that supports the development of applications through the georgia.gov infrastructure. Those requirements are:

- All applications that will be hosted on or available through georgia.gov must adhere to the Application Delivery Process and Checkpoints in this guide, unless an exception is granted.
- All applications will conform to one of the integration models listed in the Integration Model section in this guide.
- All applications hosted directly on the georgia.gov core infrastructure must be either J2EE or Web Service applications developed with J2EE and conform to the state's XML standards.

2.8

2.8 Support Core Requirements

An agency must adhere to the Distributed Portal Support Model requirements for its online application(s). These requirements ensure that constituents consistently experience the georgia.gov “no wrong door” policy and get the help they need to access the government’s online services. These requirements are:

- An agency that delivers application(s) through georgia.gov will participate in the Distributed Portal Support Model.
- Constituent contacts will be resolved as quickly as possible according to the procedures and standards outlined in any mutually agreed to Service Level Agreements for georgia.gov.
- An agency will be able to receive and respond to emails sent directly from constituents or forwarded to the agency via the Portal Contact Center.
- An agency will provide Call Scripts and Frequently Asked Questions (FAQs) to the Portal Contact Center as necessary.
- An agency that maintains its own application(s) will use the ServiceCenter® Problem Management Application to receive, track and resolve technical problems that require transfer between the Portal Contact Center and the Agency Contact Center.
- An agency will notify the Portal Contact Center when they make significant changes to their application(s).
- An agency will operate its Contact Center from 8:00am to 5:00pm on State workdays.

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3.0 Information Architecture

Information architecture (or IA) is the foundation for quality web application design and development. It serves as a blueprint for an application by laying out form, function, navigation and interaction. The IA deliverables are also excellent tools for producing accurate quotes and managing change requests for online applications.

Once the need for an application is identified, the scope should be defined and the requirements should be gathered. During this phase of a project, it is important to engage all team members, including:

- Project Managers
- Information Architects
- User Interface Designers
- Developers
- Front-End Coders
- Constituents

Engaging all team members will ensure that as much information as possible is brought to light, that the IA deliverables will be as comprehensive as possible and that any planning done based on the IA will be accurate. For definitions of the role of each team member, refer back to the introduction. As the requirements are being gathered, work may begin on the information architecture deliverables. It is important to note that the IA process may be loosely iterative, allowing for the work and re-work of requirements definition and deliverables creation as new information arises.

3.1 Information Architecture Deliverables

There are 4 information architecture deliverables necessary for a new online application:

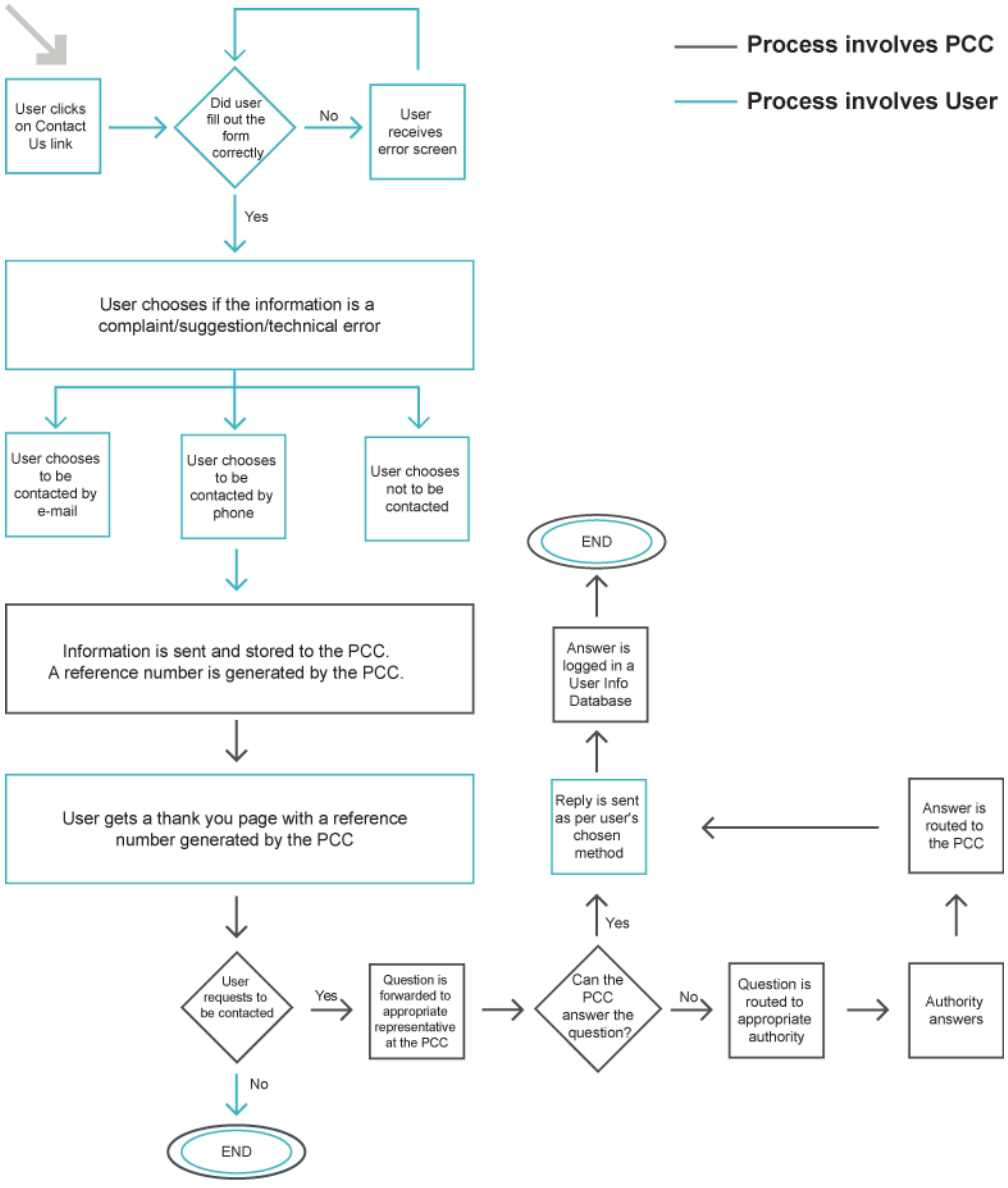
- **Use cases** – Use cases identify actors and their goals for interacting with the application. They also outline system responsibilities as the actors move through the application.
- **Site map** - The site map shows all pages of the application but does not necessarily show the interaction from page to page. It provides a graphical, hierarchical view of the entire application. The site map may also be included in the application as a page accessible to end-users who become confused about the layout and logic of the application or just want a single-glance overview of the site.
- **Site flows** - Site flows depict all possible paths an end-user may take through the application and contain conditional logic in a flow chart format. They illustrate functional flows (e.g., logout) as well as linear (contain no decision points) and non-linear (contain decision points) flows. The primary focus of site flows is end-user behavior, but they may also include technical elements such as interactions with a database or a content management system.
- **Wireframes** - Wireframes are black-and-white “skeletal prototypes” of each page of the application. They show page elements and their relative positioning, focusing on layout, information and navigation. They also indicate accessibility features such as tab order, hidden navigation and HTML-tagged headings. Placeholders should be used in wireframes for the georgia.gov logo in the upper left corner and for the agency’s logo in the upper right corner. Actual images and copy are not included in wireframes; placeholder elements are used for those as well. Wireframes should not be confused with mockups or comps, which involve graphic design to incorporate colors, imagery, shapes, aesthetics, typography and other elements.

3.1

Site Map

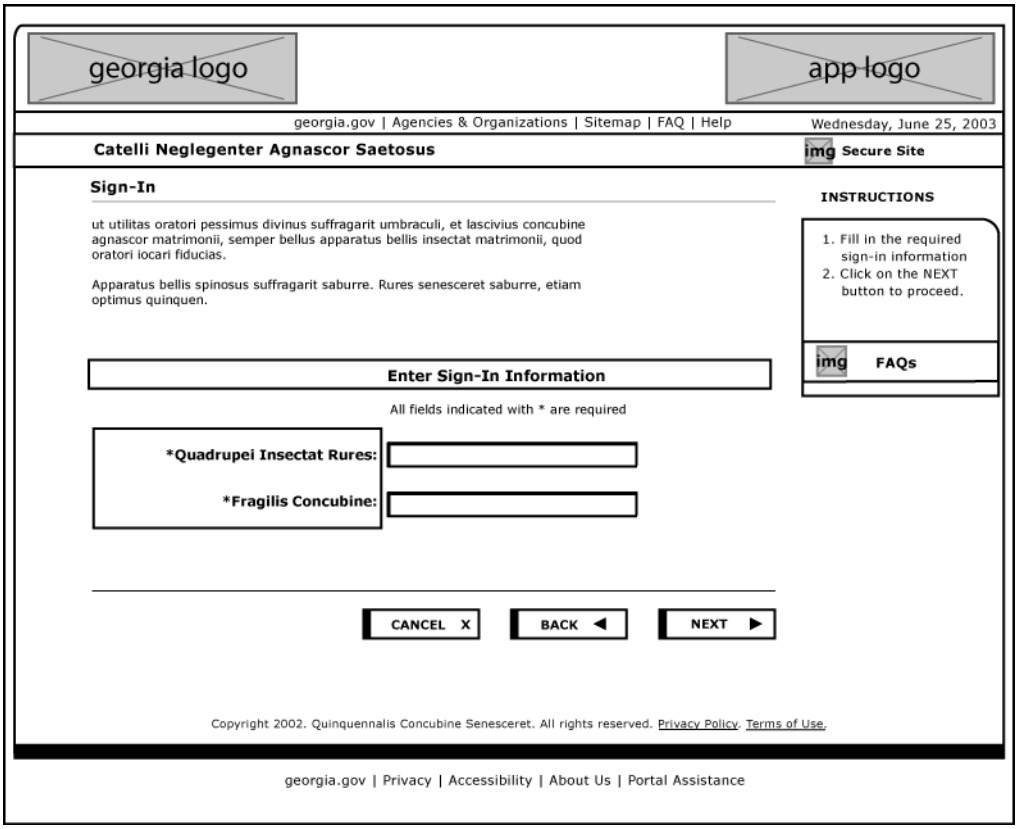
- About Us
  - History
  - Staff
  - Mission and Beliefs
- Division and Offices
  - Division (1)
  - Division (2)
  - Division (3)
- Services
  - Service (1)
  - Service (2)
  - Service (3)

Site Flow



3.1

Wireframe



3.2 Transitioning from Information Architecture to Code

Once the wireframes are created, they should be analyzed and grouped according to template type. More than one wireframe may be associated with one HTML/CSS template. The next chapter defines and explains each template available in the template library.

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4.0 HTML / CSS Templates

A library of HTML/CSS templates exists for the development of new online applications. The templates ensure a consistent end-user experience in terms of look-and-feel and visual cues as well as functionality from georgia.gov to online applications and from application to application. They are cross-browser compatible (Internet Explorer 6.0 and higher and Netscape Navigator 7.0 and higher) and Section 508 compliant. It is important to note that when the templates are used to build new applications, additional cross-browser compatibility and accessibility techniques may need to be implemented as a result of the unique nature of each application.

The templates are coded with a combination of HTML and CSS. HTML is used for structure so that assistive technologies can provide the appropriate information to end-users. CSS is used for presentation, consistency across multiple pages, simplification of maintenance and file-size-related performance optimization.

4.1 Section 508 Accessibility

Section 508 accessibility features that are incorporated into the template library include:

- Skip redundant navigation options
- Alt text for images
- HTML heading tags
- Labels for form elements
- Tabindex controls
- Acceptable use of color and contrast
- !important flags are not used (allowing end-users to override the stylesheet provided)

4.2 The Templates

The templates are coded in HTML and CSS2. There are 9 template types in the library:

- Introduction Page - with application description and scrolling Terms and Conditions (for use with long Terms and Conditions text)
- Introduction Page - with application description and non-scrolling Terms and Conditions (for use with short Terms and Conditions text)
- Introduction Page - with application description and Login
- Login Page
- Display Page
- Form Page
- Confirmation Page
- FAQ Page
- Menu Page

Application developers may:

- Use a template from library by implementing back-end code without altering the template
- Modify an existing template slightly while implementing back-end code
- Request a new template from GTA using the Element Request Form.

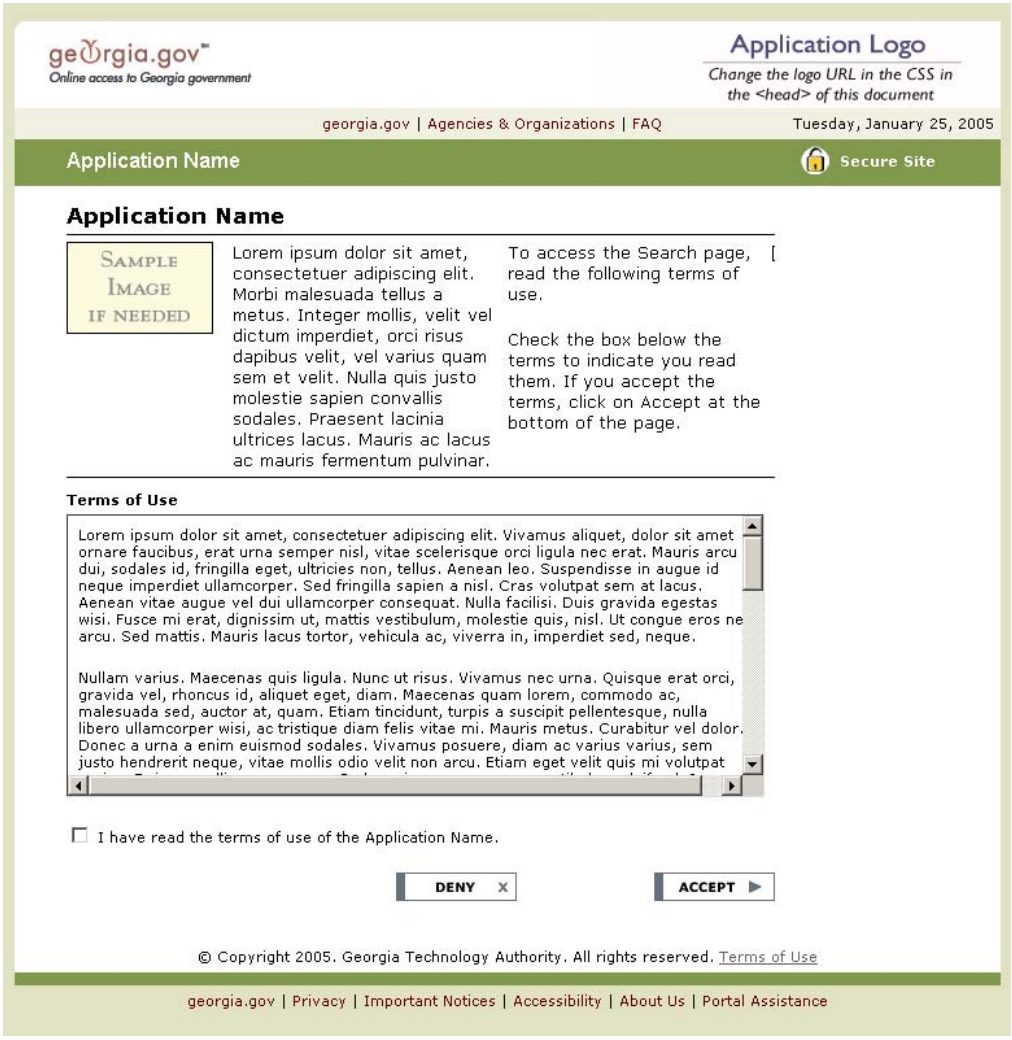
See the Appendix A of this document for a link to the available templates and the Element Request Form.

GTA should be notified of any new templates created by an agency so that they may be checked for adherence to the standards set forth in this guide and considered for addition to the template library.

4.2

Introduction Page

with scrolling application Terms and Conditions



4.2

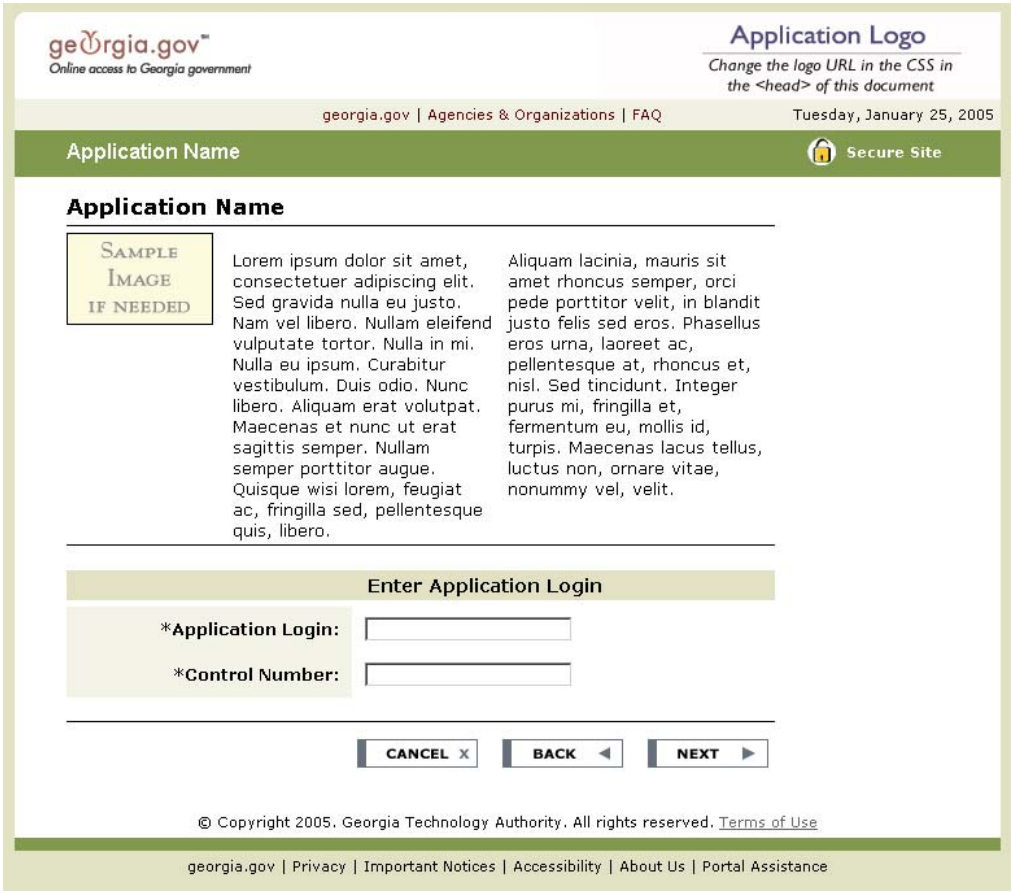
Introduction Page

with non-scrolling application Terms and Conditions

4.2

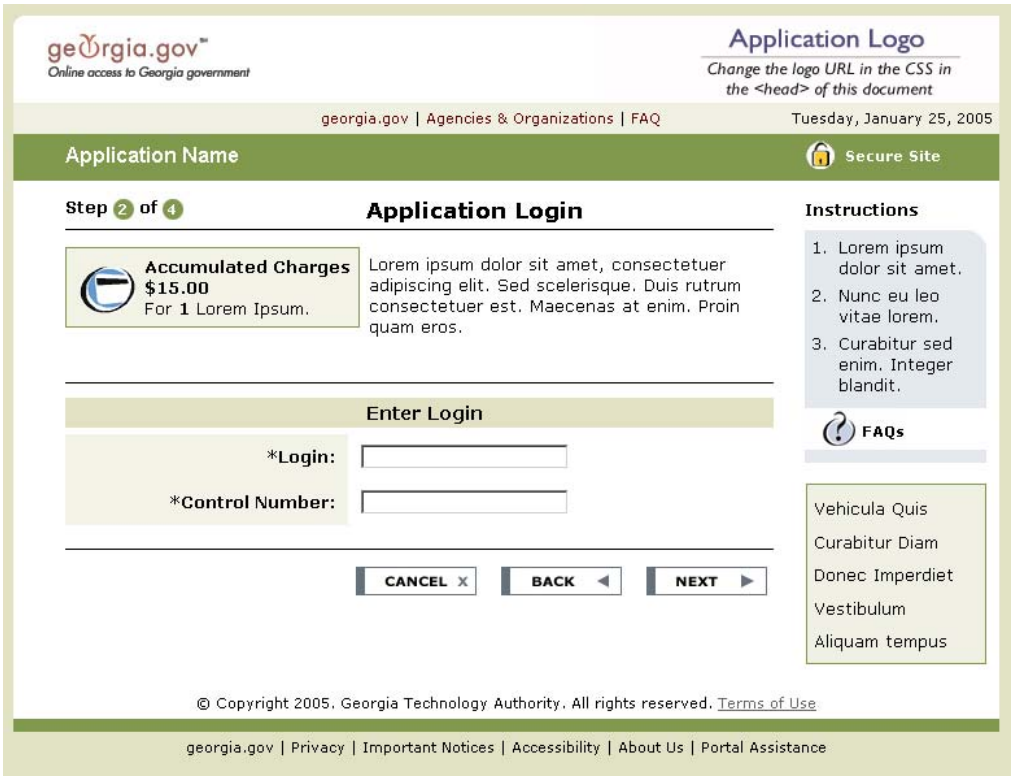
Introduction Page

with application description and Login



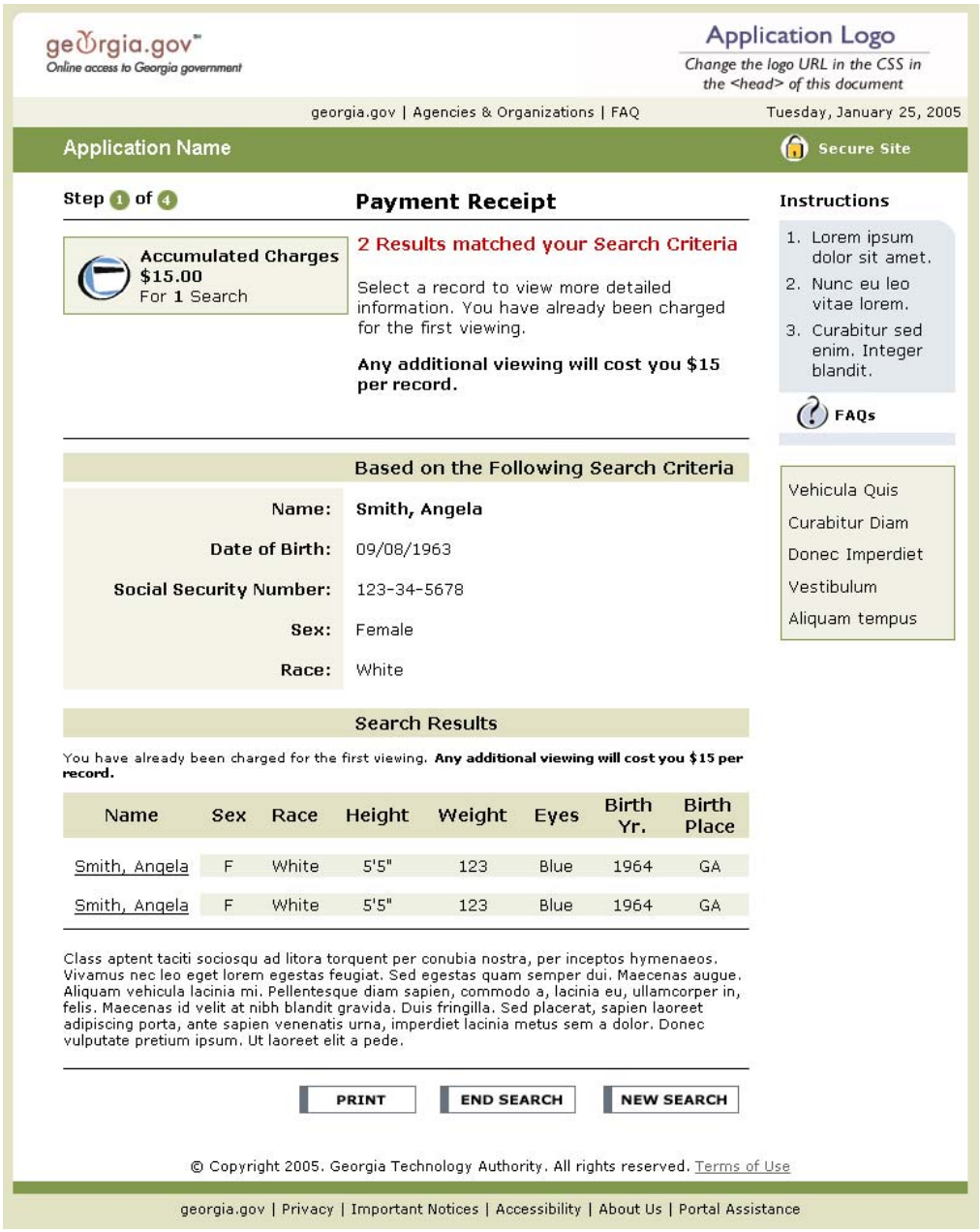
4.2

Login Page



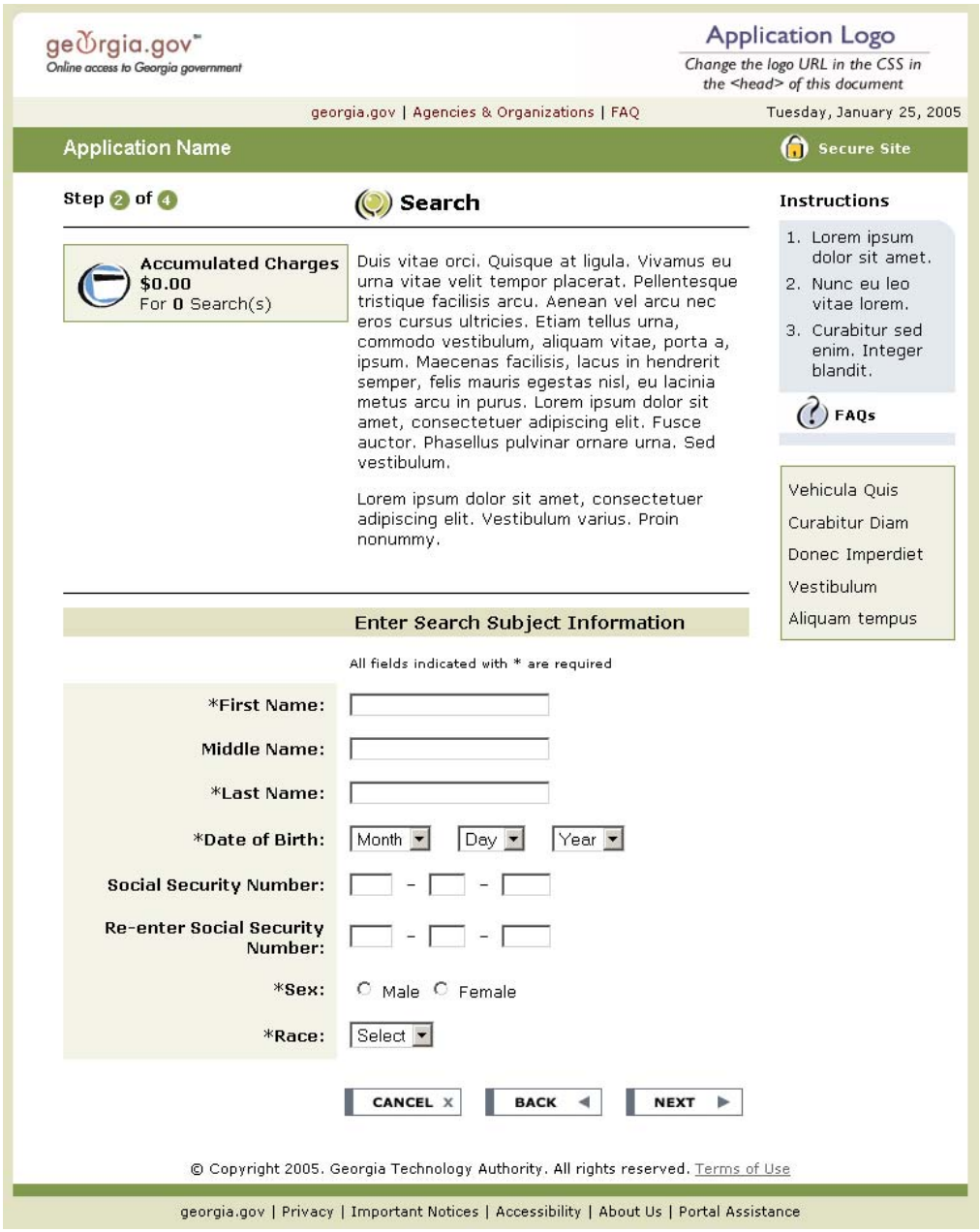
4.2

Display Page



4.2

Form Page


georgia.gov
Online access to Georgia government
Application Logo
Change the logo URL in the CSS in the <head> of this document
georgia.gov | Agencies & Organizations | FAQ
Tuesday, January 25, 2005
Application Name
Secure Site
Step 2 of 4
Search
Instructions
1. Lorem ipsum dolor sit amet.
2. Nunc eu leo vitae lorem.
3. Curabitur sed enim. Integer blandit.
FAQs
Accumulated Charges
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Duis vitae orci. Quisque at ligula. Vivamus eu urna vitae velit tempor placerat. Pellentesque tristique facilisis arcu. Aenean vel arcu nec eros cursus ultricies. Etiam tellus urna, commodo vestibulum, aliquam vitae, porta a, ipsum. Maecenas facilisis, lacus in hendrerit semper, felis mauris egestas nisl, eu lacinia metus arcu in purus. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Fusce auctor. Phasellus pulvinar ornare urna. Sed vestibulum.
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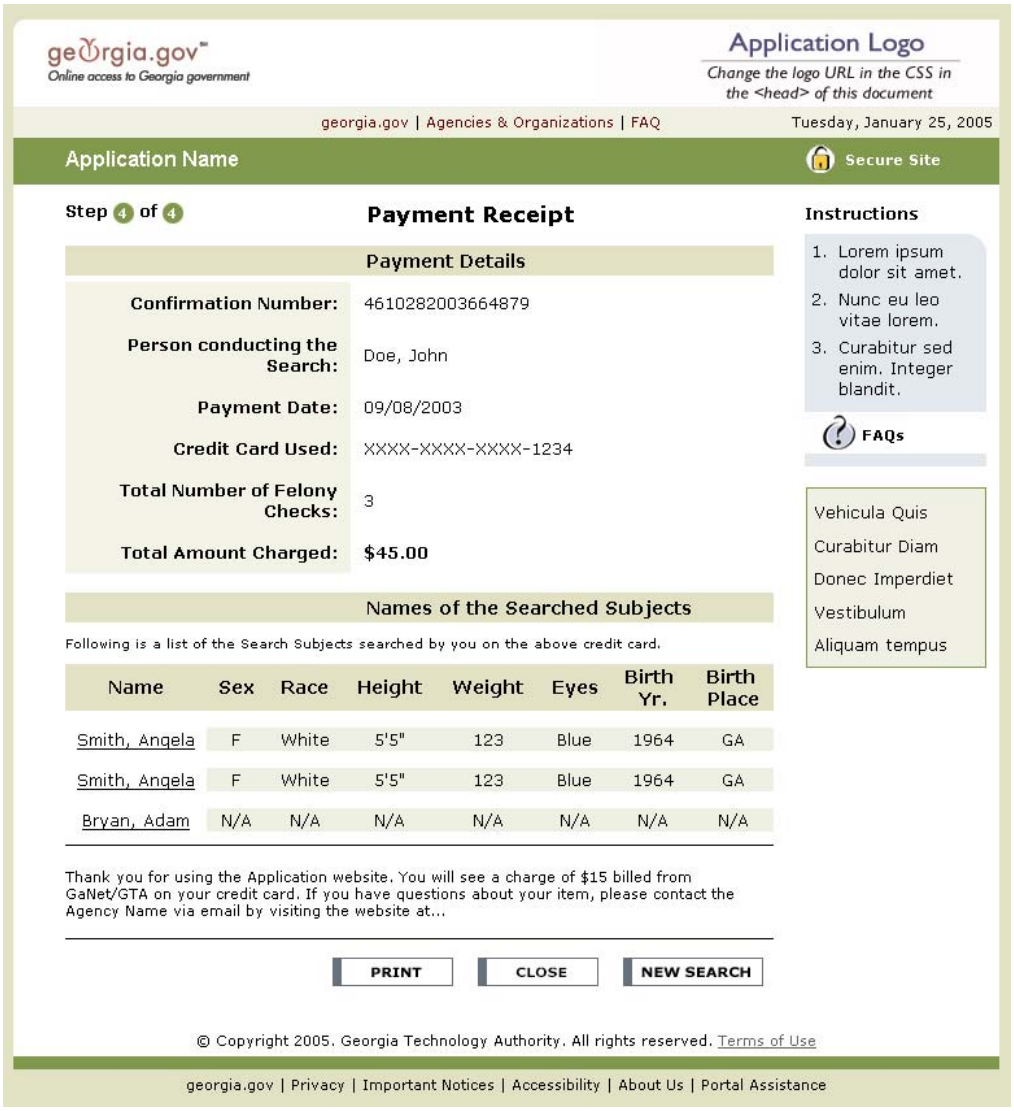
Vehicula Quis
Curabitur Diam
Donec Imperdiet
Vestibulum
Aliquam tempus
Enter Search Subject Information
All fields indicated with * are required
*First Name:
Middle Name:
*Last Name:
*Date of Birth:
Month
Day
Year
Social Security Number:
Re-enter Social Security Number:
*Sex:
Male
Female
*Race:
Select
CANCEL
BACK
NEXT
© Copyright 2005. Georgia Technology Authority. All rights reserved. Terms of Use
georgia.gov | Privacy | Important Notices | Accessibility | About Us | Portal Assistance

4.2

Confirmation Page



4.2

FAQ Page

to appear as a pop-up window from the Information bar on other template pages

Application Title
Frequently Asked Questions

georgia.gov

Contact georgia.gov Portal Assistance

- Lorem ipsum dolor sit amet?
- Pellentesque lobortis, lacus eget vehicula?
- Vestibulum mauris. Vestibulum eu magna?
- Nulla tincidunt?
- Nullam velit augue, dapibus in, egestas vitae, scelerisque id, dui. Suspendisse ullamcorper nulla eleifend enim?

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back to top

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back to top

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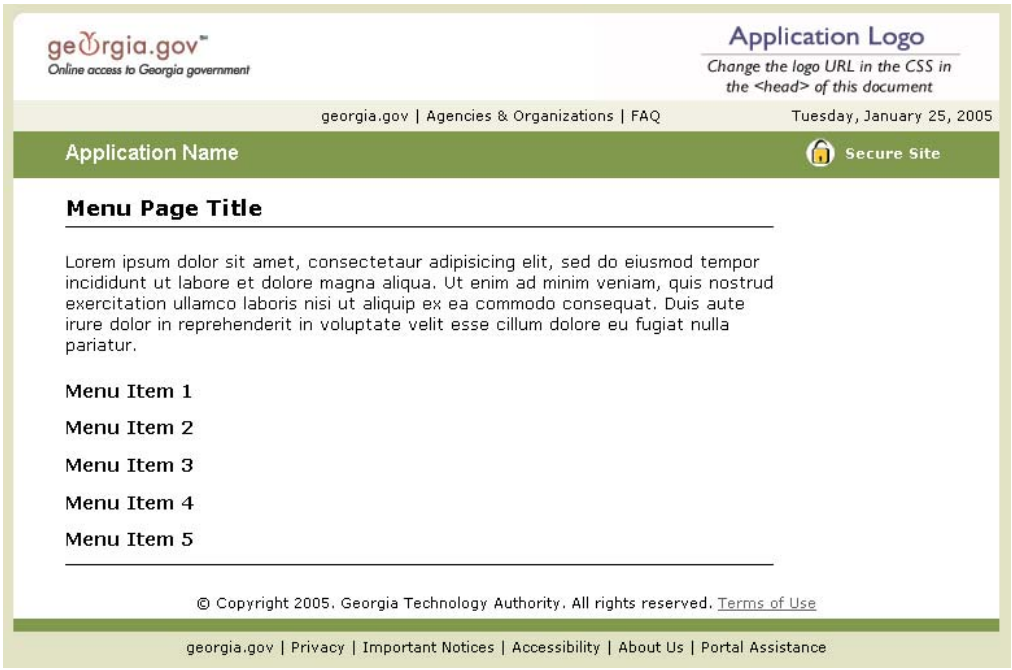
4.2

Menu Page


georgia.gov
Online access to Georgia government
Application Logo
Change the logo URL in the CSS in the <head> of this document
georgia.gov | Agencies & Organizations | FAQ
Tuesday, January 25, 2005
Application Name
Secure Site
Menu Page Title
Lorem ipsum dolor sit amet, consectetaur adipisicing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.
Menu Item 1
Menu Item 2
Menu Item 3
Menu Item 4
Menu Item 5
© Copyright 2005. Georgia Technology Authority. All rights reserved. Terms of Use
georgia.gov | Privacy | Important Notices | Accessibility | About Us | Portal Assistance

4.3

4.3 Custom HTML Code and Application-specific Images

Each template contains well-commented areas indicating the areas to be customized with JSP. When using the templates, it is important to not alter the code outside of the commented areas. Also, use discretion when adding HTML code inside of the commented areas to ensure the page layout is not broken and the guidelines in the georgia.gov style guide are adhered to. For example:

- When adding <table>, <tr> or <td> tags, use complete tables, as the commented areas are inside of a table cell.
- Use only CSS attributes that are already present in the stylesheet provided. Do not change font face, font size or font color.

Any images used should be sized appropriately and optimized for the web.

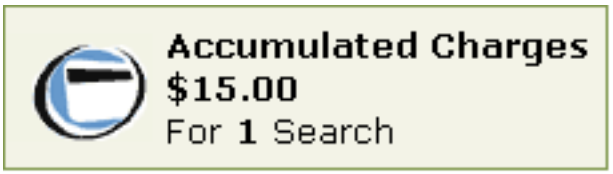
4.4 Application Elements

Application elements are functional and identifying components of an application. They serve to assist end-users in proceeding through an application, as check-points for sequential actions and as basic visual cues. Application elements available for use include:

- Numbered steps
- Accumulated charges
- Secure site icon and link
- Agency logo
- Instructions box
- Right-hand menu
- Terms and conditions JavaScript verification (optional)

Numbered Steps

Accumulated Charges



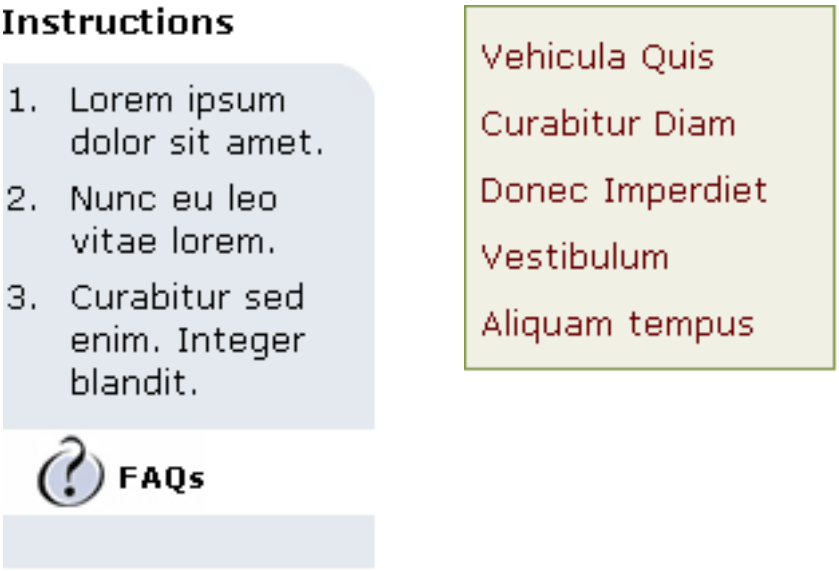
Secure Site icon

Agency Logo

4.4

Instructions Box (left)

Right-hand menu (right)



4.5 Icons

There are seven icons, each with a specific connotation and use, available for online applications:

print icon

printer-friendly icon

pdf icon

download icon

external link icon

email icon

save icon

When adding any of these icons to the templates, they should be coded with a text link next to them, aligned absolute middle.

4.6

4.6 Buttons

When using buttons for interaction in an online application, certain rules should be adhered to. It is important to note that errors may interfere with the sequential nature of buttons:

- **Next/Submit:** Use the **Next** button to advance the user to any page except for the confirmation page of an application. The **Next** button may also be used for interim data processing and storage. To send information on for storage and/or processing and to advance the user to the confirmation page of an application use the **Submit** button.
- **Previous/Back:** The **Previous** button and the **Back** buttons may be used interchangeably to move focus from one step or page in an application to the step or page immediately preceding it.
- **Close/Cancel/Clear:** Use the **Close** button to close a popup window and generate a JavaScript prompt which asks the user to confirm his/her intention of quitting the application. Use the **Cancel** button to halt progress in an application at any point and generate a JavaScript prompt which asks the user to confirm his/her intentions. Use the **Clear** button to clear all fields which contain user-entered data in a form. The **Clear** button should not clear pre-populated data.

Please use the Element Request Form to request new buttons.

4.7 Unit Testing

Once the templates are copied and customized for an application, it is important to unit test the page for layout by viewing it in a browser before custom JSP implementation begins. After front-end unit-testing is complete, the pages can be passed along to the Developers.

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5.0 Development

The guidelines in this section ensure that applications launched on georgia.gov meet industry and enterprise application architecture best practices.

For a more detailed technical explanation of these topics, consult the PDK.

5.1 Logical Tier Structure

Application development and integration should conform to the industry best practices, with separation of concerns as a guiding principle. The Portal architecture is constructed on five logical tiers:

- Client
- Presentation
- Business
- Integration
- Enterprise Resources

These tiers are described extensively in Portal documentation in the Application Integration Guidelines and the Abridged System Architecture documents and are available in the PDK.

5.2 Integration Models

GTA recommends one of the following 3 integration models:

- **Native J2EE:** application runs directly on the georgia.gov environment without the need for integration with other systems.
- **Web Service:** application functionality is provided via a Web service interface (provided by georgia.gov).
- **Legacy:** application can be extended via the WebMethods integration tier of the georgia.gov environment, allowing the application to communicate using its native language(s) and to be accessed via other applications or the presentation tier.

5.3

5.3 Programming Languages and Platforms

The architecture of individual applications, business requirements, end-users and common sense will ultimately drive programming language selection. Rules of thumbs that should guide language selection include:

- Use current, stable industry standard language implementations. When possible, avoid proprietary language extensions. Although these languages may save time and/or increase functionality now, they may introduce unwanted maintenance or costs later.
- While giving preference to current, stable industry standard languages, ensure service delivery degrades gracefully for older technologies.

Languages that may be used in online applications include:

- **HTML 4.0 and XHTML**
- **DHTML**
- **JavaScript 1.3**
- **CSS1 and CSS2**
- **XML 1.0/SOAP**
- **J2EE**
- **JSP** – The Portal Standard Tag Library (PSTL) is a collection of JSP custom tags and their supporting connectivity classes. It defines, as simple tags, core presentation functionality common to many JSP applications, allowing the developer to concentrate on the functionality of an application instead of the user interface. The intent is to save time and effort and to ensure a consistent end-user experience.

5.4 Enterprise Components

The georgia.gov application environment is a service-oriented architecture (SOA). The SOA makes it possible for a particular piece of functionality to be packaged as a service and made available to other applications. Web Services is used to make services available and to provide interoperability between disparate applications.

Enterprise components (also referred to as common services) within georgia.gov are centrally managed because of the common need for them across many different applications. Common application services include:

- Authentication
- Authorization
- Document Exchange Framework
- Presentation Framework
- Help Framework
- Logging Framework
- Payment Engine
- Portal Standard Tag Library (PSTL)

Additional enterprise components will be made available as they are completed.

A more technical explanation of the existing enterprise components can be found in the PDK.

5.4

The following sections contain a brief synopsis of each of the existing enterprise common services.

I. Authentication

Authentication is the process of validating a claim of identity. A user may be validated as authentic through a set of credentials, such as a user ID and password, a Smart Card or even biometric measurement (e.g., fingerprint scan).

II. Authorization

Authorization is the process of providing constituents' access to resources based on privileges assigned to them. The authorization may be based on either a user's status as an individual or assignment of a role.

III. Document Exchange Network

The Document Exchange Framework (DEF) enables the secure transfer of documents programmatically both internally and across the boundary of State Government. It is a general, messaging-based solution which relies on EBXML protocol and Web Services. It is a valuable tool promoting the interoperability and integration of disparate systems.

IV. Presentation Framework

As the leading open source framework for developing Enterprise Java applications on the J2EE platform, Struts is the recommended presentation framework.

A technical discussion of the Presentation Framework can be found in the Application Integration Guidelines.

Another important resource in the Presentation Framework is the Portal Standard Tag Library (PSTL). The PSTL is a collection of JSP custom tags and their supporting connectivity classes. It defines, as simple tags, core presentation functionality common to many JSP applications and allows developers to separate application content from its presentation.

V. Help Framework

The Help Framework is incorporated into the PSTL components.

VI. Logging Framework

A common framework for logging is available as a Portal service. The Logging Framework allows different agency application to log messages to a centralized resource from which reports can be generated.

Technical documentation for the Logging Framework can be found in the PDK.

5.4

VII. Payment Engine

The Payment Process Controller Component:

- Insulates applications in georgia.gov from changes to payment processing services (e.g., engine or gateway)
- Provides application developers with a standard, reliable and stable payment processing API
- Increases the manageability of payment processing for e-commerce applications
- Improves the overall quality of service from payment processing applications

The Payment Process Controller Component does not replace functionality in any of the payment engines. Rather it is limited to providing a thin layer of functionality situated between applications and other payment processing components.

More information on the Payment Process Controller Component can be found in the PDK.

How to Invoke Enterprise Components

The technical details for invocation of enterprise components are beyond the scope of this document.

See the PDK for this information.

New Enterprise Components

An agency who believes there is a need for a new enterprise component should submit their suggestion to GTA.

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6.0 Quality Assurance

The quality assurance and deployment of an application are two very closely knit processes. In order for an application to be promoted from one level to the next it must pass or exceed certain criteria as outlined in the application test plan. The criteria against which an application is tested are:

- Agency requirements
- GTA/EPIA portal standards

A test plan should be drafted for each new online application. The Portal Applications Test Plan outlines and defines the strategy and approach to be taken to perform testing on web applications. It is also a template which can be adapted for new applications.

6.1 Tests

Tests to be performed include:

- Function testing
- User interface testing
- Accessibility testing
- External interface testing
- Database integrity testing
- Load, stress and performance testing
- Security and access control testing
- Configuration testing
- Regression testing

6.2 Application Promotion

An application is promoted according to the following schedule, conditional upon satisfaction of testing criteria:

- **Test:** Complete unit, system and client acceptance testing (Agency)
- **Migrate:** Migrate to georgia.gov test portal (Agency and GTA)
- **Test:** Perform acceptance testing and certification (GTA)
- **Migrate:** Migrate to georgia.gov staging portal (Agency and GTA)
- **Migrate:** Release to georgia.gov production portal (Agency and GTA)

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7.0 Deployment

Items to be included into any Deployment set of instructions:

1. A SHORT description of what the application is, how it works and what systems are involved
2. The tools used in developing the code and application
3. A list of end-product binaries and libraries that will be deployed
4. A general description of how the app will be deployed –
    a. Sun deployapp/removeapp
    b. Sun Package Add/Package remove
    c. Make
    d. Ant script
    e. Manual copying of files
    f. Other deploy scripts
5. Installation prerequisites –
    a. Disk space
    b. Memory
    c. Number of processors
    d. Operating System and rev level
    e. Required software with rev level
        i. App Server
        ii. Web Server
        iii. Servlet engine
        iv. Database
        v. Other
    f. Required directory structure
    g. Single or multiple instances of app server
6. Description (flow) of how deployable files get created, where, by who and how they make their way into our Dev, Test and Production Environments.
7. List of steps detailing how to make required configuration changes to software packages already on board the platforms on which the new app has a dependency.
8. Identify those tasks that need to be done only once and those tasks that need to be done for each deploy.
9. Step by step Instruction on how to deploy the app itself
    a. Break the total deploy into logical modules
        i. App binaries
        ii. Database
        iii. Supporting applications
            1. Nuance
            2. Vignette
10. Identify those applications that need to be restarted for the new changes to be picked up and the order that the server stops, change applications and the restarts need to be in the same session.
11. Roll Back instructions
12. Uninstall instructions
13. Expected latency in server restarts
14. Specific instructions on order of deployments if order is important
15. Contact information

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Element Request Form
www.georgia.gov/vgn/images/portal/cit_1210/40/20/37749559Element Request Form.pdf

georgia.gov Templates (zip file)
www.georgia.gov/vgn/images/portal/cit_1210/57/24/37751424css_templates.zip